

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 (Currently Amended). A semiconductor device having a thin film transistor, the semiconductor device comprising;

a silicon oxide nitride film formed over a substrate; and

a semiconductor film formed over the silicon oxide nitride film, wherein the silicon oxide nitride film ranges from 0.3 to 1.6 in a ratio of the concentration of nitrogen to the concentration of silicon, and

wherein the silicon oxide nitride film has a refractive index of from 1.5 to 1.8 to a wavelength of ~~623.8~~ 632.8 nm.

2 (Currently Amended). A semiconductor device having a thin film transistor, the semiconductor device comprising;

a silicon oxide nitride film formed over a substrate; and

a semiconductor film formed over the silicon oxide nitride film, wherein the silicon oxide nitride film ranges from 0.1 to 1.7 in a ratio of the concentration of oxygen to the concentration of silicon, and

wherein the silicon oxide nitride film has a refractive index of from 1.5 to 1.8 to a wavelength of ~~623.8~~ 632.8 nm.

3 (Currently Amended). A semiconductor device having a thin film transistor, the semiconductor device comprising;

an insulating film formed over a substrate and having at least a silicon oxide nitride film and an insulating layer containing silicon and oxygen; and

a semiconductor film formed over the insulating film;

wherein the silicon oxide nitride film ranges from 0.3 to 1.6 in a ratio of the concentration of nitrogen to the concentration of silicon, and

wherein the silicon oxide nitride film has a refractive index of from 1.5 to 1.8 to a wavelength of ~~623.8~~ 632.8 nm.

4 (Currently Amended). A semiconductor device having a thin film transistor, the semiconductor device comprising;

an insulating film formed over a substrate and having at least a silicon oxide nitride film and an insulating layer containing silicon and oxygen; and

a non-single crystal semiconductor film formed over the insulating film,

wherein the silicone oxide nitride film ranges from 0.1 to 1.7 in a ratio of the concentration of oxygen to the concentration of silicon, and

wherein the silicon oxide nitride film has a refractive index of from 1.5 to 1.8 to a wavelength of ~~623.8~~ 632.8 nm.

5 (Original). A device according to claim 3, wherein the silicon oxide nitride film is in contact with a surface of the substrate.

6 (Original). A device according to claim 4, wherein the silicon oxide nitride film is in contact with a surface of the substrate.

7 (Original). A device according to claim 3, wherein the semiconductor film is in contact with a surface of the insulating layer containing silicon and oxygen.

8 (Original). A device according to claim 4, wherein the semiconductor film is in contact with a surface of the insulating layer containing silicon and oxygen.

9 (Original). A device according to claim 3, wherein the insulating layer containing silicon and oxygen is made of silicon oxide nitride containing silicon, oxygen and nitrogen and wherein a ratio of the concentration of nitrogen to the concentration of silicon ranges from 0.1 to 0.8.

10 (Original). A device according to claim 3, wherein the insulating layer containing silicon and oxygen is made of silicon oxide.

11 (Original). A device according to claim 4, wherein the insulating layer containing silicon and oxygen is made of silicon oxide.

12 and 13 (Canceled).

14 (Previously presented). A device according to claim 1 wherein said semiconductor device is selected from the group consisting of a video camera, a digital camera, a projector, a head-mounted display, a car navigation, a car stereo, a personal computer, a mobile computer, a cellular phone, and a digital book.

15 (Previously presented). A device according to claim 2 wherein said semiconductor device is selected from the group consisting of a video camera, a digital camera, a projector, a head-mounted display, a car navigation, a car stereo, a personal computer, a mobile computer, a cellular phone, and a digital book.

16 (Previously presented). A device according to claim 3 wherein said semiconductor device is selected from the group consisting of a video camera, a digital camera, a projector, a head-mounted display, a car navigation, a car stereo, a personal computer, a mobile computer, a cellular phone, and a digital book.

17 (Previously presented). A device according to claim 4 wherein said semiconductor device is selected from the group consisting of a video camera, a digital camera, a projector, a head-mounted display, a car navigation, a car stereo, a personal computer, a mobile computer, a cellular phone, and a digital book.

18 (Currently Amended). A semiconductor device comprising:
an insulating underlying film provided over a substrate and comprising at least a silicon oxide nitride film and an insulting layer containing silicon and oxygen;
a semiconductor film comprising a channel forming region provided over the insulating underlying film;
a gate insulating film provided over the channel forming region; and

a gate electrode provided adjacent to the channel forming region and over the gate insulating film,

wherein the silicon oxide nitride film ranges from 0.3 to 1.6 in a ratio of the concentration of nitrogen to the concentration of silicon,

wherein the silicon oxide nitride film has a thickness of 50 to 200 nm,

wherein the insulating layer containing silicon and oxygen has a thickness of 10 to 300 nm,
and

wherein the silicon oxide nitride film has a refractive index of from 1.5 to 1.8 to a wavelength of ~~623.8~~ 632.8 nm.

19 (Currently Amended). A semiconductor device comprising:

an insulating underlying film provided over a substrate and comprising at least a silicon oxide nitride film and an insulating layer containing silicon and oxygen;

a semiconductor film comprising a channel forming region provided over the insulating underlying film;

a gate insulating film provided over the channel forming region; and

a gate electrode provided adjacent to the channel forming region and over the gate insulating film,

wherein the silicon oxide nitride film ranges from 0.1 to 1.7 in a ratio of the concentration of oxygen to the concentration of silicon,

wherein the silicon oxide nitride film has a thickness of 50 to 200 nm,

wherein the insulating layer containing silicon and oxygen has a thickness of 10 to 300 nm,
and

wherein the silicon oxide nitride film has a refractive index of from 1.5 to 1.8 to a wavelength of ~~623.8~~ 632.8 nm.

20 (Currently Amended). A semiconductor device comprising:

- a silicon oxide nitride film provided over a substrate;
- a first transistor provided in a pixel and over said silicon oxide nitride film;
- a first semiconductor film comprising a first channel forming region of said first transistor;
- a source region and a drain region provided in said first semiconductor film and sandwiching said first channel forming region;
- a first gate insulating film provided over said first channel forming region;
- a first gate electrode provided adjacent to said first channel forming region and over said first gate insulating film;
- a pixel electrode provided over said substrate and connected with one of said source region and said drain region;
- a second transistor provided in a driver and over said silicon oxide nitride film;
- a second semiconductor film comprising a second channel forming region of said second transistor;
- a second gate insulating film provided over said second channel forming region;
- a second gate electrode provided adjacent to said second channel forming region and over said second gate insulating film,

wherein said silicon oxide nitride film ranges from 0.3 to 1.6 in a ratio of the concentration of nitrogen to the concentration of silicon, and

wherein the silicon oxide nitride film has a refractive index of from 1.5 to 1.8 to a wavelength of ~~623.8~~ 632.8 nm.

21 (Currently Amended). A semiconductor device comprising:

- a silicon oxide nitride film provided over a substrate;
- a first transistor provided in a pixel and over said silicon oxide nitride film;
- a first semiconductor film comprising a first channel forming region of said first transistor;
- a source region and a drain region provided in said first semiconductor film and sandwiching said first channel forming region;
- a first gate insulating film provided over said first channel forming region;
- a first gate electrode provided adjacent to said first channel forming region and over said first gate insulating film;
- a pixel electrode provided over said substrate and connected with one of said source region and said drain region;
- a second transistor provided in a driver and over said silicon oxide nitride film;
- a second semiconductor film comprising a second channel forming region of said second transistor;
- a second gate insulating film provided over said second channel forming region;
- a second gate electrode provided adjacent to said second channel forming region and over said second gate insulating film,

wherein the silicon oxide nitride film ranges from 0.1 to 1.7 in a ratio of the concentration of oxygen to the concentration of silicon, and

wherein the silicon oxide nitride film has a refractive index of from 1.5 to 1.8 to a wavelength of ~~623.8~~ 632.8 nm.

22 (Previously presented). A device according to claim 18 wherein said semiconductor device is incorporated into a personal computer.

23 (Previously presented). A device according to claim 18 wherein said semiconductor device is incorporated into a video camera.

24 (Previously presented). A device according to claim 18 wherein said semiconductor device is incorporated into a goggle type display.

25 (Previously presented). A device according to claim 18 wherein said semiconductor device is incorporated into a player using a recording medium.

26 (Previously presented). A device according to claim 18 wherein said semiconductor device is incorporated into a digital camera.

27 (Previously presented). A device according to claim 18 wherein said semiconductor device is incorporated into a projector.

28 (Previously presented). A device according to claim 18 wherein said semiconductor device is incorporated into a cellular phone.

29 (Previously presented). A device according to claim 18 wherein said semiconductor device is incorporated into a portable book.

30 (Previously presented). A device according to claim 18 wherein said semiconductor device is incorporated into a display.

31 (Previously presented). A device according to claim 19 wherein said semiconductor device is incorporated into a personal computer.

32 (Previously presented). A device according to claim 19 wherein said semiconductor device is incorporated into a video camera.

33 (Previously presented). A device according to claim 19 wherein said semiconductor device is incorporated into a goggle type display.

34 (Previously presented). A device according to claim 19 wherein said semiconductor device is incorporated into a player using a recording medium.

35 (Previously presented). A device according to claim 19 wherein said semiconductor device is incorporated into a digital camera.

36 (Previously presented). A device according to claim 19 wherein said semiconductor device is incorporated into a projector.

37 (Previously presented). A device according to claim 19 wherein said semiconductor device is incorporated into a cellular phone.

38 (Previously presented). A device according to claim 19 wherein said semiconductor device is incorporated into a portable book.

39 (Previously presented). A device according to claim 19 wherein said semiconductor device is incorporated into a display.

40 (Previously presented). A device according to claim 20 wherein said semiconductor device is incorporated into a personal computer.

41 (Previously presented). A device according to claim 20 wherein said semiconductor device is incorporated into a video camera.

42 (Previously presented). A device according to claim 20 wherein said semiconductor device is incorporated into a goggle type display.

43 (Previously presented). A device according to claim 20 wherein said semiconductor device is incorporated into a player using a recording medium.

44 (Previously presented). A device according to claim 20 wherein said semiconductor device is incorporated into a digital camera.

45 (Previously presented). A device according to claim 20 wherein said semiconductor device is incorporated into a projector.

46 (Previously presented). A device according to claim 20 wherein said semiconductor device is incorporated into a cellular phone.

47 (Previously presented). A device according to claim 20 wherein said semiconductor device is incorporated into a portable book.

48 (Previously presented). A device according to claim 20 wherein said semiconductor device is incorporated into a display.

49 (Previously presented). A device according to claim 21 wherein said semiconductor device is incorporated into a personal computer.

50 (Previously presented). A device according to claim 21 wherein said semiconductor device is incorporated into a video camera.

51 (Previously presented). A device according to claim 21 wherein said semiconductor device is incorporated into a goggle type display.

52 (Previously presented). A device according to claim 21 wherein said semiconductor device is incorporated into a player using a recording medium.

53 (Previously presented). A device according to claim 21 wherein said semiconductor device is incorporated into a digital camera.

54 (Previously presented). A device according to claim 21 wherein said semiconductor device is incorporated into a projector.

55 (Previously presented). A device according to claim 21 wherein said semiconductor device is incorporated into a cellular phone.

56 (Previously presented). A device according to claim 21 wherein said semiconductor device is incorporated into a portable book.

57 (Previously presented). A device according to claim 21 wherein said semiconductor device is incorporated into a display.

58 (Currently Amended). An electroluminescence device comprising:
a silicon oxide nitride film formed over a substrate;

a semiconductor film formed over the silicon oxide nitride film,

wherein the silicon oxide nitride film ranges from 0.3 to 1.6 in a ratio of the concentration of nitrogen to the concentration of silicon, and

wherein the silicon oxide nitride film has a refractive index of from 1.5 to 1.8 to a wavelength of ~~623.8~~ 632.8 nm.